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Maximum load-carrying capacity and workhorse durability are just two of the many reasons why the Fairchild C-123 Assault Transport is ideally suited to tough jobs in all overcast world operations.

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Sherry Shinnery Foster
ETWGA Festival

to be a good idea to have a professional review your manuscript before you submit it. This is especially true if you are a first-time author. A professional review can help you identify areas for improvement and make your manuscript more appealing to publishers. There are many professional reviewers available, and you can find one by searching for "manuscript review" or "manuscript editing" on the internet. Once you have found a reviewer, you can contact them and discuss their services and fees. If you decide to hire a reviewer, you should provide them with a copy of your manuscript and a list of questions or areas you would like them to focus on. The reviewer will then provide you with a detailed report of their findings and recommendations. This report can be very helpful in making revisions to your manuscript and increasing your chances of getting it published.

Phillips 66
PRESENTS

PRESENTS

MILESTONES IN AVIATION

Straight Up

In the Civil War and the Spanish-American War, U. S. Army aerial observers soared straight up in hot-air balloons tethered by cables.

Today the U. S. Navy's revolutionary new Convair XP-41 and Lockheed XF-1 fighter planes take off and fly straight up. After a vertical take-off, these VTOLs level off and fly horizontally at more than 500 miles per hour. And not only do the VTOLs take off straight up, but they also land straight down—sitting down on their tails only, with their noses pointed straight up.

Powered by twin-turbine jet engines geared to two contra-rotating propellers, the VTGs need no special landing fields or conventional long runways. They can take off and land "on a dime"—either on land or on shipboard.



It's Performance that Counts!

For many years, Phillips Petroleum Company has performed its part as one of our country's leading suppliers of efficient, power-packed aviation fuels for military and commercial use.

Today Phillips produces tremendous quantities of 115/145 grade aviation gasoline, and also furnishes the most modern fuels for the latest designs in turbo-prop and jets.

Operators know that in aircraft fuel, it's performance that counts. And they know that Philips 66 products deliver outstanding performance!

AVIATION DIVISION
PHILLIPS PETROLEUM COMPANY
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WING-ALL - Fast and easy wing fastener

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WILSON - Ground lock, wing stud, aluminum fastener

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MIDWESTERN MODEL 501
RECORDING OSCILLOGRAPH
for laboratory or flight test recording



See this oscillograph and many other of MIDWESTERN's test instruments and servo components in Room A of the New York IRE Show, March 19-22.

A few of its many features are—

- 12 inch width records • Recording speeds from 652 to 1250 inches per second • Plug-in power supply units for immediate adaptation to 28 volt dc or 115 volt 60 or 500 cps power sources • Plug-in timing units which provide timing times of .001 sec/sec, .01, .01 and/sec, .10, or .10 and/sec 1.0 second intervals • Precise timing synchronization between two or more units • Complete remote control facilities • Ability to operate under extreme temperatures and accelerations.

products

- Oscillographs
- Electromechanical and electrostatic test
- Magnetic Simulators
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Convair "Terror" Surface-to-Air Missile

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The surging public usually pinpoints Uncle Sam as being a loose man with a dollar, busily throwing our cash away with both hands. American industry, serving the defense program, will tell you nothing can be farther from the truth. On the contrary, the Government is reaching for top honors for sharp-pencil buying.

Typical of the Government's conservation program is the wide acceptance of rolled and flush welded rings as the most economical way to produce circular weldments for jet aircraft engines, guided missile parts and many other products of our military defense program. "Value Analysis" is fast becoming a part of American industry's buying procedure. For further information on ring applications write to:

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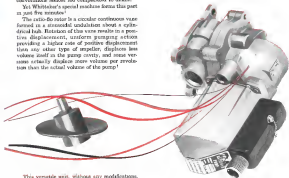
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Why Whittaker Ratio-Flo Pump has a Five-to-One Advantage

The answer is the rotor—heart of the Whittaker Ratio-Flo unit. Entirely new in concept, it has conventional almost too complexed to define.

Yet Whittaker's special machine forms this part in just five minutes!

The ratio-flo rotor is a circular continuous vane formed in a stainless steel disk about a cylindrical hub. Rotation of this vane results in a positive displacement, uniform pumping action providing a higher rate of positive displacement than any other type of impeller, displaces less volume itself in the pump cavity, and some versions actually displace more volume per revolution than the actual volume of the pump!



This versatile unit, without any modifications, could divide two or more flows—pump and divide two or more flows—join two or more flows—pump and join two or more flows.

Your Whittaker Field Engineer can give you detailed information about these new fast pumps, air pumps, flow joiners and flow dividers using the ratio-flo principle. Why not get in touch with him today.

Overall advantage of the Whittaker Ratio Flo pump is efficiency—in all cases over 30% as against the average pump efficiency of 10%. It shows limited current application of pumping and current requirement is only about 1/2 to 1/3 as much as with a centrifugal pump.

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AL-58N Characteristics

Accuracy Pressure —
20 to 5000 psi
over flow between ports —
5 to 10 seconds
Totally enclosed unit
Infinite fluid
Inherent Accuracy — 1/2%
90 to 1000 psi and 10 to 1000
psi — 1/2% accuracy
Various fluids
Weight — 4.4 lbs. maximum
Size — 10" x 4" x 4" approximately
Can be used in almost
any type of pressure

IN ONE COMPACT NEW DUAL-SENSING PRESSURE SWITCH

The conventional pressure switch can only indicate when one pressure exceeds another by a certain amount. General Controls' new dual-sensing, bidirectional pressure switch goes far beyond that. It can watchdog two systems at once — completely. It is adjusted to "control" for the normal condition between two systems operating at the same or different pressures. Thus, if imbalance occurs on either line — it can detect it, determine the direction of the deviation (up or down), and actuate a corrective feedback action! The AL-58N dual-sensing switch will also actuate warning lights in circuits equipped with two pump hydraulic systems. Get General Controls' pressure switches into your plans for the future now. For information on the complete line, write for Catalog 58A.

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AL-58N
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WITH THE AMPEX 800 AIRBORNE
MAGNETIC TAPE RECORDER

you help yourself get
the key facts faster

The Amplex 800 that you install in your aircraft is a vital link in a new data speed-up program. It records data on magnetic tape in a form most readily used by automatic data reduction systems. These are now being installed at government test facilities and at certain major aircraft manufacturers. Their objective is to get a guided flight test data back to the engineer sooner.

The Amplex 800 has all the practical requirements for airborne recording in the most advanced military aircraft. It can record hundreds of simultaneous data channels (multiplexed onto 7 or 14 tape tracks). By microsecond-gate amplifiers it can encompass practically any conceivable combination of data. And the Amplex 800 is light in weight — low in bulk — and designed to high altitude environmental requirements.

You have greatest assurance of data compatibility when you choose the Amplex 800. It performs to precise standards and furnishes data for reproduction on other Amplex Recorders. Reproducers: These are the most widely used magnetic tape equipment and their standards are now accepted everywhere.

Amplex Corporation is prepared to give information and assistance on the entire data acquisition and reduction system of which the Amplex 800 Airborne Recorder is a part. For description literature on the recorder, write Dept. UU-2460.



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Contributing to the ever-increasing use of ELECTRONICS in AIRCRAFT instrumentation, LORAL is continuing the development and production of Airborne Equipment — new in concept, instrumentation and combined with high accuracy.

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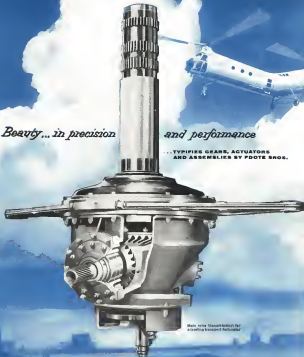
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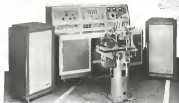
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Dynamic Integrating Gyro Servo Table



Greenleaf Manufacturing Company,
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realized the need for a Dynamic
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Test Table was designed and developed
to facilitate the evaluation of Inte-
grating Gyros, and Greenleaf now
makes this valuable test unit available
to industry.

The Gyro Servo Test Table can measure the following characteristics:

- | | |
|---|--|
| 1. The drift rate of the gyro unit. | 5. Minimum rate detectable. |
| 2. The current perfect angular velocity sen-
sitivity ratio | 6. High limit angular velocity deviation of
performance |
| 3. The characteristic time. | 7. Low limit angular velocity deviation. |
| 4. The angular velocity input voltage rate
output sensitivity. | 8. Signal generator linearity. |
| | 9. Torque generator linearity. |

Since a time interval meter is incorporated in the system, the following data can also be obtained:

- | | |
|---|--|
| 10. Spin motor excitation frequency. | 14. Signal generator null output voltage |
| 11. Spin motor excitation voltage | 15. In addition the following tests can be made: |
| 12. Spin motor excitation current. | 16. Gyro damping gap temperature |
| 13. Signal generator excitation current | 17. Accurate determination of the input rate. |

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